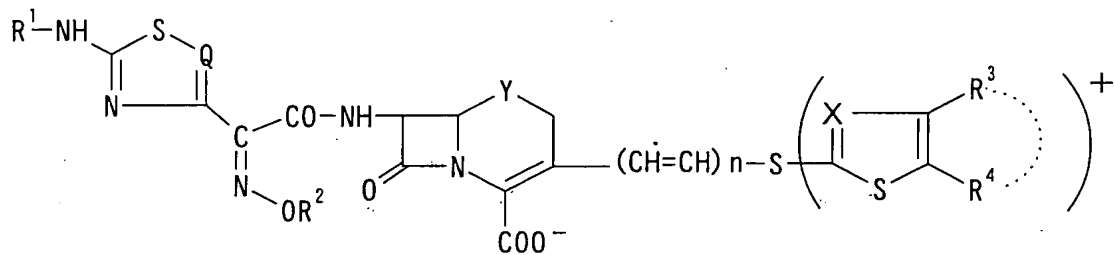


Abstract

A novel cephem compound of the formula:



- 5 wherein R¹ is a phosphono group or a group convertible to a
 phosphono group; R² is a hydrogen atom or a group having a linkage
 through a carbon atom; each of Q and X is a nitrogen atom or CH;
 Y is S, O or CH₂; n is 0 or 1; one of R³ and R⁴ is a pyridinium
 10 group which may be substituted and the other is a hydrogen atom
 or hydrocarbon-group which may be substituted, or R³ and R⁴ taken
 together may form a quaternalized nitrogen-containing
 heterocyclic ring which may be substituted, or its ester or its
 salt, which has a superior anti-bacterial activity, stability,
 absorbability, etc., a production thereof and a pharmaceutical
 15 composition containing it, is provided.